

Session 4 Tuesday, July 26, 2005 9:00–11:00

Center for Association Leadership, Concourse Level

The Public Health Consequences of Disasters

USAID Summer Seminar Series Washington, D.C. 26 June 2005

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Centers for Disease Control & Prevention
Washington, DC

Disasters and Emergencies



Natural Disasters



Transportation **Disasters**



Terrorism



Technological Disasters

Pandemics

Epidemiol Rev. 1981;3:140-62.

Research issues and directions in the epidemiology of health effects of disasters.

Logue JN, Melick ME, Hansen H.

Epidemiol Rev. 1990;12:192-8.

The epidemiology of health effects of disasters. Review

Lechat MF.

Myths and Realities in Disaster Situations

Myth: Foreign medical volunteers with any kind of medical background are needed.

Reality: The local population almost always covers immediate lifesaving needs. Only medical personnel with skills that are not available in the affected country may be needed.

Myth: Any kind of international assistance is needed, and it's needed now!

Reality: A hasty response that is not based on an impartial evaluation only contributes to the chaos. It is better to wait until genuine needs have been assessed

Myth: Epidemics and plagues are inevitable after every disaster. Reality: Epidemics do not spontaneously occur after a disaster and dead bodies will not lead to catastrophic outbreaks of exotic diseases. The key to preventing disease is to improve sanitary conditions and educate the public.

Myth: Disasters are random killers.

Reality: Disasters strike hardest at the most vulnerable group, the poor --especially women, children and the elderly.

Myth: Locating disaster victims in temporary settlements is the best

Reality: It should be the last alternative. Many agencies use funds normally spent for tents to purchase building materials, tools, and other construction-related support in the affected

THE PUBLIC HEALTH CONSEQUENCES DISASTERS

EDITED BY ERIC K. NOJI

The Public Health Consequences of Disasters Edited by Eric K. Noji

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Biological Terrorism - A New Trend?



- 1984: Oregon, Salmonella
- 1991: Minnesota, Ricin toxin
- 1994: Tokyo, Sarin and biological attacks
- 1995: Ohio. Yersinia pestis
- 1997: Washington DC, Anthrax hoax
- 1998: Nevada, nonlethal strain of B. anthracis
- 1999: Numerous Anthrax hoaxes



Probe aims at sale of deadly bacteria

By Lon Sham USA TODAY

Public Health Service officials are reviewing procedures for the sale of hazardous microbes, prompted by the arrest of an Ohio man charged with fraudulently obtaining three vials of bubonic plague bacteria.

On Monday, the person behind that concern - Larry Harris, 43, of Lancaster, Ohio, the deadly nerve gas attack on - entered an innocent plea to -Tokyo's subway in March. federal charges.

Currently, there are no laws against buying, growing or otherwise obtaining potentially deadly biological materials.

"Disease-causing microorganisms are prevalent and Quemical and Biological Arms easy for anyone with limited technical knowledge to get their hands on," says University of Louisville microbiologist Roosld Afles.

In knowledgeable hands, experts say the right microbe could kill thousands - a chilling fact in view of the April bombing to Oklahoma City and termine the vulnerability of ruary of possessing a biological

We seem to be entering a period in which there's a little more willingness to achieve maxtmum number of deaths possible.

- Kyle Olson, army centrel expert

"We seem to be entering a period in which . . . there's a little more willingness to achieve maximum number of deaths possible," says Kyle Cison, executive vice president of the Control Institute, a non-profit think tank in Alexandria, Va.

Military tests in the 1950s and 1960s showed that the spreading of dangerous organisms in the New York City subway and elsewhere could kill thousands of people.

The lests were done to de-

the American public to a biological attack," says Army spokesman Capt. Joseph Ptek. "It's scary stuff."

Cases of biological terrorism within the USA have been rare.

In 1984, followers of the Bhagwan Shree Raineesh spread salmonella bacteria purchased from a medical supply house - on restaurant salad bars in Wasco County, Ore.

More than 500 people got sick in a plot to win control of the county by making voters sick on election day.

▶ Two Minnesotn tax protesters were convicted to Feb-

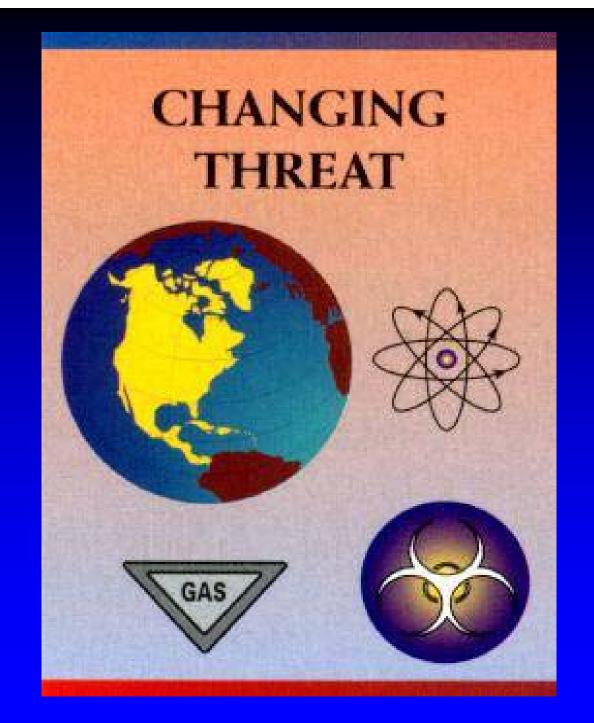


By Chris Russell Columbus Disperch INNOCENT PLEA: Larry Harris, with police Lt. Don Regan, was charged with fraudulently obtaining the bubonic plague bacteria.

the material from the compa-

Police said Harris ordered one. The toxin made by the bacteria that causes bocalism,





"A bioterrorism attack against Americans anywhere in the world is inevitable in the 21st century."

Anthony Fauci, Director, NIAID

Clinical Infectious Diseases 2001;32:678

Major Disasters Humanitarian Crises, 1997-2005

- Kosovo refugee crisis
- Turkey earthquake
- E. Timor civil conflict
- Gujarat India Earthquake
- Bam, Iran Earthquake
- South Asia Tsunami

IMPACTO
DE LOS
DESASTRES
EN LA
SALUD PUBLICA

ERIC K. NOJI

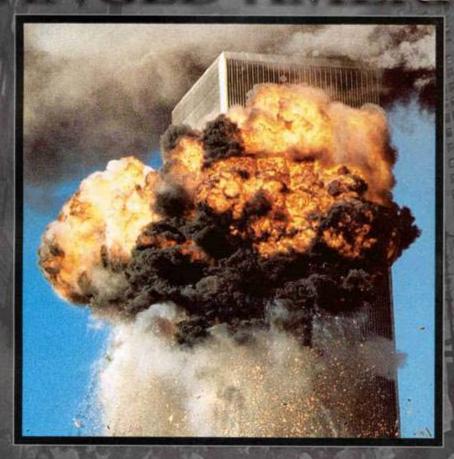




DEGANIZACION PANAMERICANA DE LA SALUD

SEPTEMBER 11, 2001

THE DAY THAT CHANGED AMERICA





DRAFT

Lessons Learned from Anthrax Incidents Late 2001

Bad communication adds to crisis

- Mixed messages from multiple "experts"
- Late information "overcome by events"
- Over-reassuring messages
- No reality check on recommendations
- Myths, rumors, doomsayers not countered
- Poor performance by spokesperson/leader
- Public power struggles and confusion

Decision Making without Data

- Need to make decisions rapidly in the absence of data
- Access to subject matter experts was limited
- No "textbook" experience to guide response
- Understanding of "risk" evolved as outbreak unfolded
- Need coherent, rapid process for addressing scientific issues in midst of crisis

The Department of Homeland Security Was Established By Public Law and Executive Order on 24 January, 2003

Thomas Joseph Ridge was Sworn-In as the first Secretary of Homeland Security by the President and the Vice President during a Ceremony at the White House



The Cross Hall, January 24, 2003



The Sphere Project

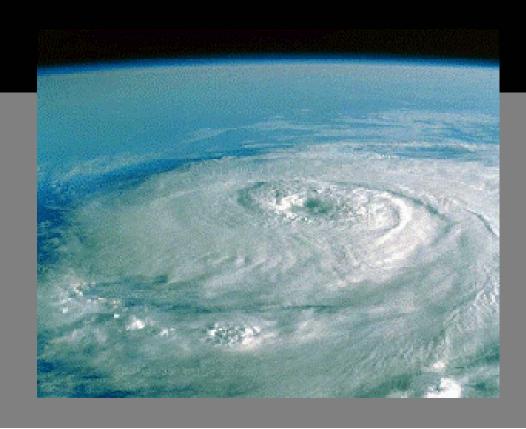






Humanitarian Charter and Minimum Standards in Disaster Response

U.S. Military Medicine in International Humanitarian Assistance



Military Assistance in Complex Emergencies: What Have We Learned Since the Kurdish Relief Effort?

CAPT. Trueman W. Sharp, MD, MPH; ¹LT. COL. John M. Wightman, MD, MA; ² Michael J. Davis, PA-C; ³ CDR. Sterling S. Sherman, MD, MPH; ⁴ Frederick M. Burkle Jr., MD, MPH⁵

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 Departments of Emergency Medicine and International Health, The Johns Hopkins

Abstract

After the success of relief efforts to the displaced Kurdish population in northern Iraq following the Gulf War, many in the US military and the international relief community saw military forces as critical partners in the response to future complex emergencies (ČEs). However, successes in subsequent military involvement in Somalia, Rwanda, the former Yugoslavia, and other CEs proved more elusive and raised many difficult issues. A review of these operations reinforces some basic lessons that must be heeded if the use of military forces in humanitarian relief is to be successful. Each CE is unique, thus, each military mission must be clearly defined and articulated. Armed forces struggle to provide both security and humanitarian relief, particularly when aggressive peace enforcement is required. Significant political and public support is necessary for military involvement and success. Military forces cannot execute humanitarian assistance missions on an ad hoc basis, but must continue to develop doctrine, policy and procedures in this area and adequately train, supply, and equip the units that will be involved in humanitarian relief. Militaries not only must cooperate and coordinate extensively with each other, but also with the governmental and non-governmental humanitarian relief organizations that will be engaged for the long term.

Sharp TW, Wightman JM, Davis MJ, Sherman SS, Burkle FM:



Lessons and Controversies: planning and executing immediate relief in the aftermath of the war in Iraq

FREDERICK M BURKLE, JR, BRADLEY A WOODRUFF & ERIC K NOJI

ABSTRACT The international community since the end of the Cold War has failed to agree on a satisfactory solution as to how it should respond to protect vulnerable populations at risk from internal state wars and human rights abuse. Western powers frustrated by this have increasingly resorted to intervention on the basis of 'right to intervene'. This paper argues that what is required is for the international community to exercise 'a right to protect' through the UN. Meanwhile the USA since 9/11 has gone down the route of unilateral intervention on the basis of 'self-defence' and in the case of Iraq has extended this concept by placing humanitarian as well as military operations under the single command of the Defense Department. The paper demonstrates how this led to the exclusion of expertise from planning, co-ordination and professional support in the field of humanitarian work. The operational lessons learned are

Iraq, military and humanitarian operations should as far as possible be separated, leaving the leadership of relief to the dedicated international agencies

The Immediate Future 2003 – 2010

A Revolution in biotechnology, genomics and proteomics that will affect all human beings

Increasing disaster risk

- ✓ Increasing population density
- ✓ Increased settlement in high-risks areas
- ✓ Increased technological hazards and dependency
- ✓ Increased terrorism: biological, chemical, nuclear?
- ✓ Aging population in industrialized countries
- ✓ Emerging infectious diseases (AMR)
- ✓ International travel (global village)

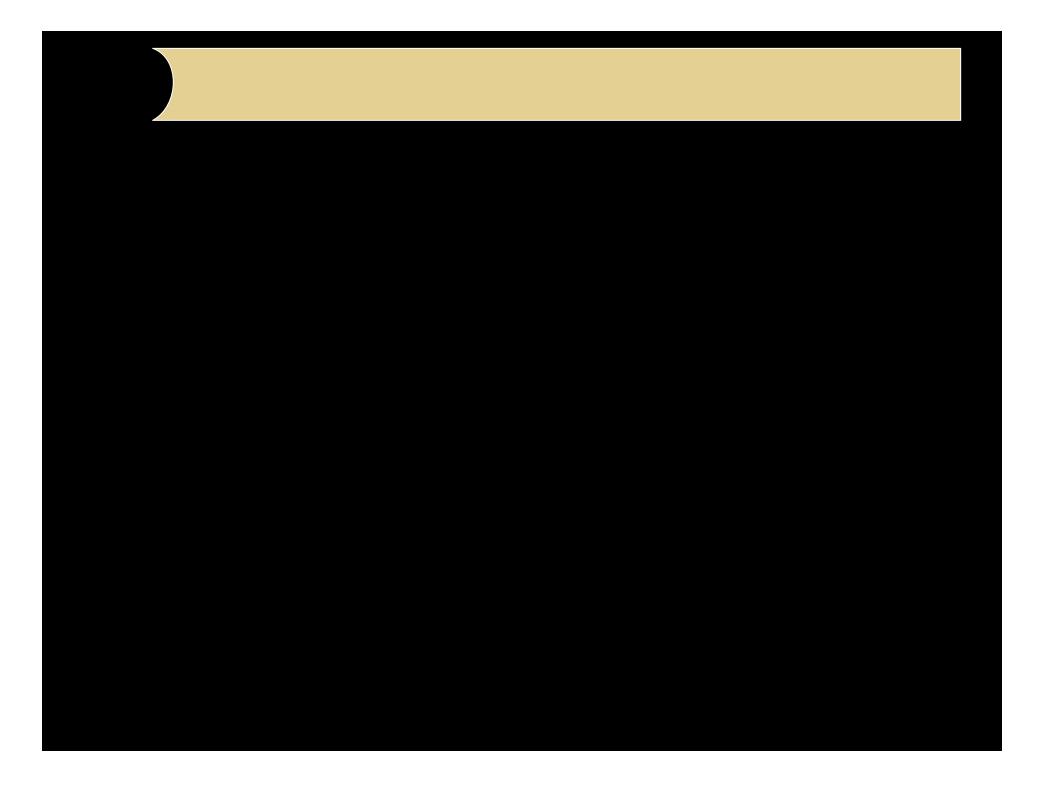
- Increasing Global Travel
- Rapid access to large populations
- Poor global security & ...evereness potential for simultaneous creation of large numbers of casualties







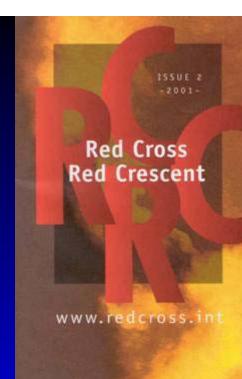




Chronic Smoldering Complex Emergencies

SUDAN:

- Chronic war since 1955
- Children grow up chronically malnourished
- Know only a culture of violence
- Little access to healthcare and education
- Only expatriate healthcare
- Reproductive health considered a luxury



- Surviving the violence in Guinea
- Families in the line of fire
- A diary from India's earthquake zone
- Helping remote regions in Afghanistan

Global Warming

Professional Stove-Piping



Natural Disasters



Transportation **Disasters**



Terrorism



Technological Disasters

Pandemics

Thank You

